

In re application of: David M. Lilenfeld
U.S. Serial Number: 09/379,646
Group Art Unit: 2673
Filing Date: August 23, 1999
Title: **Cursor control device for
convenient and ergonomic hand-held
and work-surface use**

Fulton County, Georgia

Inventor's Affidavit¹

PERSONALLY APPEARED before the undersigned officer authorized to administer oaths, David M. Lilenfeld, Inventor/Applicant, and, after being duly sworn, states on oath the following:

1.

My name is David M. Lilenfeld, and I am the Applicant for the above-captioned patent application. I am competent in all respects to testify regarding the matters set forth in this Affidavit, which I give voluntarily and in support of the foregoing Amendment and Request For Reconsideration of Final Office Action. I have personal knowledge of the facts stated herein and know them to be true.

¹ As noted earlier, Applicant insists that the Office Action fails to set forth a *prima facie* case of obviousness, for that reason alone, the obviousness rejection should be withdrawn. If the Examiner agrees, then consideration of the Inventor's Affidavit is not necessary.

2.

Bidiville et al. (U.S. Patent No. 5,578,817) is directed to a cursor control device solely for work surface use only. *Bidiville's* "upper housing" serves as a support surface upon which the user rests his or her entire hand, including the ulnar fingers. (*Bidiville*, Col. 25, lines 1-11; figures 20B and 20D). The first three fingers partially rest on the *Bidiville* keys (*Bidiville*, figure, 20B, numerals 2020A-2020C) and the last finger rests on the unoccupied space on *Bidiville's* top surface (to the contiguous right of numeral 2020A (*Bidiville*, figure 20B)).

With *Bidiville*, the hand is in a pronated (i.e., spread) position while resting on the support surface. (*Bidiville*, Col. 25, lines 1-11; figures 20B, 20D). *Bidiville's* "upper housing" is purposefully at a 30-degree angle. (*Bidiville*, Col. 25, lines 1-11; figures 20B, 20D). This, according to *Bidiville*, maintains the user's finger and thumbs in an ergonomically desirable "neutral posture" (i.e., at a 30-degree angle). (*Bidiville*, Col. 25, lines 1-11; figures 20B, 20D). A work surface is needed so that the *Bidiville* device maintains the desired 30-degree angle, thereby maintaining the user's hand in the corresponding "neutral posture."

The *Bidiville* device must also rest on a work surface to resist the downward force placed on it by the user's resting hand. Also, since the thumb and all the fingers of the *Bidiville* device rest on top of the device, no fingers are available to hold the device in the user's hand. (*Bidiville*, Col. 25, lines 1-11; figures 20B, 20D). Finally, *Bidiville* only describes use of the device on a work surface.

3.

Jarlance-Huang is directed to a cursor control device to be used solely while being hand-held. *Jarlance-Huang* describes itself as a "palm-top" wireless trackball. (*Jarlance-Huang*, Col. 1, lines 4-5). Also, the only description for use of the *Jarlance-Huang* device is in the user's hand. (*Jarlance-Huang*, Col. 2, lines 42-45). There does not appear to be a way *Jarlance-Huang* could be used while on a work surface. The buttons are underneath the *Jarlance-Huang* device and would be obstructed when the device is resting on a work surface. Also, if the *Jarlance-Huang* device rests on a work surface, the thumb would not align the fingers with the buttons, nor align the ulnar fingers with the side of the device. Nor would the *Jarlance-Huang* buttons align the thumb with the ball.

4.

The cursor control device that would result from using *Jarlance-Huang* to cure the deficiency of *Bidiville*, as conjured by the Office Action, would be inoperable and lack utility, as described in the accompanying Response.

5.

Achieving the device of the pending claims required substantial inventive effort by the Inventor/Applicant. Considering the limitations of the human hand, successfully inventing a device that ergonomically and comfortably serves both activities without significant change in the user's hand position and without the need for any mechanical change was the result of lengthy deliberation, study, planning and experimentation.

6.

As described in the specifications, during some uses of a computer, the computer user is primarily entering data through the keyboard. At such times, a cursor control device should rest on a work surface since the user's hands are occupied by the keyboard. During other computer uses, the user is entering data by "pointing and clicking" with a cursor control device. At these times, a cursor control device is most conveniently held in the user's hand. Thus, a cursor control device that can be used both while on a work surface and while being hand-held is needed. Moreover, such a device that does not require any mechanical changes to switch between the two types of uses, and allows the user's hand to maintain substantially the same position during both types of uses, is a great advancement in the art. The only such device is embodied in the pending claims of the Inventor's Application. Had this been "obvious" it would have been done years ago.

FURTHER AFFIANT SAYETH NOT.


David M. Lilenfeld

Sept. 19, 2002
Date

Sworn to and subscribed before me this 19th day of September, 2002.

NOTARY PUBLIC Notary Public, Cobb County, Georgia.
My Commission Expires April 11, 2003.
[NOTARIAL SEAL]